Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Currently Amended) A method of designing a heat seal width which comprises;

(1) heat-sealing a test piece of a sheet to be heat-sealed at a temperature lower than the fusion temperature of a heat seal portion of the sheet,

(2) heat-sealing another test piece of the sheet at a temperature at or higher than the fusion temperature,

(3) pulling to peel a heat-sealed portion of each test piece, and measuring the pull strength variation with peel length,

(4) calculating the peel energy in various peel ~~length~~lengths of the test piece heat-sealed at a temperature lower than the fusion temperature of the heat seal portion of the sheet by integrating the pull strength variation,

(5) calculating ~~also~~the peel energy of the test piece heat-sealed at the temperature ~~of~~at or higher than the fusion temperature by integrating the pull strength variation up to rupture at the heat-sealed portion, and

(6) setting the heat seal width at a peel length having a peel energy higher than the peel energy of the test piece heat-sealed at a temperature ~~of~~at or higher than the fusion temperature.

2. (Original) The method of claim 1 wherein the temperature lower than fusion temperature is lower than the fusion temperature by 1 to 20 °C.

3. (Original) The method of claim 1 wherein the temperature at or higher than the fusion temperature is at or higher than the fusion temperature by 10 °C.

4. (Currently Amended) The method of claim 1 wherein the temperature lower than fusion temperature and the temperature at or higher than the fusion temperature is measured ~~of~~at a welding face to be bonded by heat-sealing.

5. (Currently Amended) A method of designing a heat seal width which comprises;

(1) repeating heat-sealing of test pieces of a sheet to be heat-sealed ~~with~~at varying heat-sealing ~~temperature~~temperatures around the fusion temperature of a heat seal portion of the sheet,

(2) pulling to peel a heat-sealed portion of each test piece, and measuring the pull strength variation with peel length,

(3) calculating the peel energy in various peel ~~length~~lengths of each test piece at each heat-sealing temperature lower that the fusion temperature by integrating the pull strength variation to determine a variation of the peel energy with the heat-sealing temperature at various peel ~~length~~lengths,

(4) calculating ~~also~~the peel energy of at least one test piece heat-sealed at a temperature ~~of~~at or higher than the fusion temperature by integrating the pull strength variation up to rupture at a heat-sealed portion, and

(5) setting the heat seal width at a peel length having a peel energy higher than the peel energy of the test piece heat-sealed at a temperature ~~of~~at or higher than the fusion temperature.

6. (Currently Amended) The method of claim 5 wherein the peel energy of the test piece heat-sealed at a temperature

~~of~~at or higher than the fusion temperature is a maximum peel energy ~~therein~~thereof.

7. (Currently Amended) A method of distinguishing peel ~~seal~~seals with a rupture seal which comprises;

(1) repeating heat-sealing of test pieces of a sheet to be heat-sealed obliquely with varying heat-sealing ~~temperature~~temperatures around the fusion temperature of a heat seal portion of the sheet,

(2) pulling to peel a heat-sealed portion of each test piece, and measuring the pull strength variation with peel length to determine a maximum pull strength,

(3) plotting the maximum pull strength against heat-sealing temperature, and

(4) determining the position of ~~the~~a pull strength lower than the peak of the maximum pull strength by 20 %, which is set from experimental results, by considering experimental error on the side of a higher heat-sealing temperature than the peak.

8. (Currently Amended) The method of claim 7 wherein the angle of the heat-sealed portion is 10 to 70 degrees against the cross direction of the test piece.

9. (Currently Amended) A method of designing a heat seal width which comprises;

(1) repeating heat-sealing of test pieces of a sheet to be heat-sealed obliquely with varying heat-sealing ~~temperature~~temperatures around the fusion temperature of a heat seal portion of the sheet,

(2) pulling to peel a heat-sealed portion of each test piece, and measuring the pull strength variation with peel length to determine a maximum pull strength,

(3) plotting the maximum pull strength against heat-sealing temperature, ~~and~~

(4) determining the position of ~~the~~a pull strength lower than the peak of the maximum pull strength by 20 % which is set from experimental results by considering experimental error on the side of a higher heat-sealing temperature than the peak~~.~~,

(5) calculating the peel energy in various peel ~~length~~lengths of the test piece at a temperature lower than the position by integrating the pull strength variation,

(6) calculating ~~also~~the peel energy of the test piece at a temperature at the position or higher than that by integrating the pull strength variation up to rupture at heat-sealed portion, and

(7) setting the heat seal width at a peel length having a peel energy higher than the peel energy obtained in (6).